

Title (en)

DOUBLE HETEROJUNCTION III-NITRIDE STRUCTURES

Title (de)

III-NITRID-STRUKTUREN MIT DOPPELTEM HETEROÜBERGANG

Title (fr)

STRUCTURES À BASE DE NITRURE III À DOUBLE HÉTÉROJONCTION

Publication

EP 3195365 A1 20170726 (EN)

Application

EP 15722414 A 20150507

Priority

- US 201414457436 A 20140812
- US 2015029628 W 20150507

Abstract (en)

[origin: US9231064B1] A semiconductor structure having: a Group III-N channel layer, a Group III-N top-barrier polarization-generating layer forming a heterojunction with an upper surface of the channel layer; and a Group III-N back-barrier polarization-generating layer forming a heterojunction with a lower surface of the channel layer. The channel layer has disposed therein a predetermined n-type conductive dopant.

IPC 8 full level

H01L 29/778 (2006.01); **H01L 29/20** (2006.01)

CPC (source: EP US)

H01L 21/2654 (2013.01 - US); **H01L 29/205** (2013.01 - US); **H01L 29/36** (2013.01 - US); **H01L 29/66462** (2013.01 - US); **H01L 29/7784** (2013.01 - EP US); **H01L 29/7786** (2013.01 - US); **H01L 29/7787** (2013.01 - US); **H01L 29/7788** (2013.01 - US); **H01L 29/7789** (2013.01 - US); **H01L 29/2003** (2013.01 - EP US); **H01L 29/365** (2013.01 - EP US)

Citation (search report)

See references of WO 2016025043A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

US 9231064 B1 20160105; EP 3195365 A1 20170726; EP 3195365 B1 20210113; TW 201611271 A 20160316; TW I577012 B 20170401; WO 2016025043 A1 20160218

DOCDB simple family (application)

US 201414457436 A 20140812; EP 15722414 A 20150507; TW 104116474 A 20150522; US 2015029628 W 20150507